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THE GENESEE FARMER.

SATURDAY, MARCH 24, 1838.

SUBSOIL PLOUGHING.

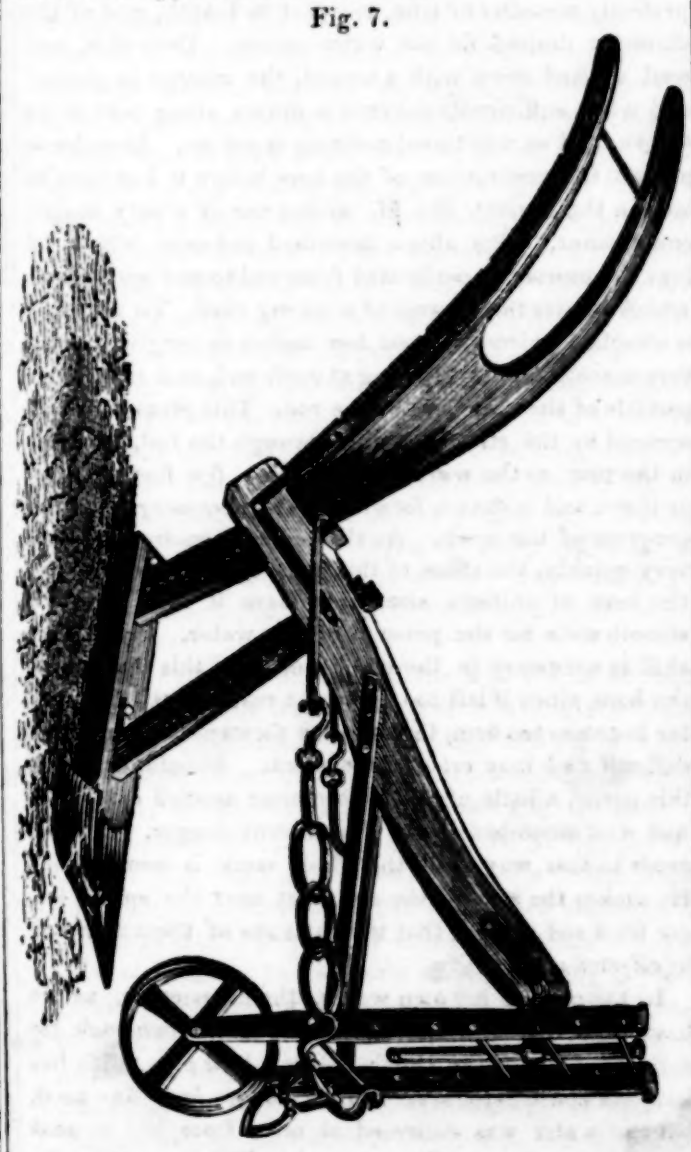
The extreme difficulty of rendering tenacious and stiff clays, or what are termed hardpan soils, fit for cultivation by any of the ordinary methods of ploughing, and manuring; and the fact, that covered draining in such soils will in most cases cost more than the actual value of the land, since the drains in soils of this class must be made deep and near together, in order to be effectual, has induced practical farmers in England to endeavor to devise some way of overcoming the evil, without the expense of covered draining. It is well known by those who cultivate stiff clay or hardpan soils, that such are the first to suffer from excessive moisture, or excessive drouth. Their compact nature retains on the surface, all the rain that falls upon it until it runs off on the surface, or is carried off by the slow process of evaporation; thus in wet seasons drowning all plants; and in dry ones, as the absorbing or conducting powers of such soils are always small, the surface moisture being evaporated, the plants are deprived of their proper nutriment, and in many cases perish, from the difficulty the roots find in penetrating the earth to a depth sufficient to reach the moist earth.

It is evident then that if in such soils, the earth could be moved and brokon up to the depth of 18 inches or 2 feet, without having this unproductive earth brought to the surface, that an opportunity would be furnished for superfluous moisture to drain from the surface, and also for the roots to penetrate the earth to a depth that would ensure their not perishing from drouth. Manure, or sandy marls, which when spread on the surface of such soils can only be productive of a temporary benefit, would, where the hard substratum was broken up, penetrate deeper, their effects be longer felt, and in fact, a new and fertile soil, suitable for the production of any plants, be gradually formed.

Deep ploughing, or trench ploughing, was at first attempted as the mode of producing these desirable results. In this way, one plough turned over the surface, the furrow slice being of the depth of six or eight inches, and of the necessary width. Following immediately after and in the same furrow was another plough with a strong team, that broke up in the hard compact soil another and still deeper furrow, throwing the earth upon the surface, and thus in effect reversing the soil to the depth of twelve or fourteen inches. This mode of ploughing was found to remedy in a great measure the evils of surface stagnant water, and the suffering from drouth, but it produced another serious one, viz. that for a year or two, and until corrected by heavy manuring, the compact soil so turned up was sterile and barren, hardly paying the expence of cropping. Unless therefore manure could be had in any assignable quantity, trench, or such deep ploughing was found to be improper in soils of this class.

It was at last conceived that a plough which should loosen and pulverize the soil to the depth of eighteen or twenty inches, without bringing the *dead* earth to the surface, would produce the desired effect, and obviate the difficulties of trench ploughing. A plough for this purpose, was invented in England some six or eight years since, which produced the desired influence on the soil; but which was so costly and clumsy a contrivance, being about fifteen feet in length, weighing four hundred and fifty pounds, all iron, and requiring six or eight horses to work it in a compact soil, that it did not come into general use, though its benefits were incontrovertible. Since that period several have been announced, but do not seem to have met with general favor, until about four years since the attention of Sir E. Stracey was directed to the subject, and a plough was produced, which with some improvements since added, seem to have left nothing to be desired, so far as the plough is concerned. The plough is thus described in a letter from the inventor, to the editor of the London Farmer's Magazine, of last January. "I beg to state that four years since I invented a plough for breaking up the hard pan (as it is called) which lies a few inches from the surface of the greater part of our Norfolk lands; and which is apparently composed of gravel cemented by clay, and so hard as even to resist several blows of the pick-axe. I have improved much the construction of the plough from what it was at first. My plough now weighs only one hundred and fifty pounds, the whole length from the extreme end of the beam to the extreme end of the handles is only seven feet; the head of the plough including the share is only twenty-four inches; and I can plough easily with three horses an acre and a quarter a day, to the depth of 18 or 20, or even 24 inches. The plough breaks the pan or soil without turning it up; and it is my intention to make use of it for planting trees, instead of trenching the ground for that purpose. Any person who may think the plough worth their attention is welcome to a model thereof on application to my bailiff."

Fig. 7.



In the same Magazine for September, last, there is an engraving of the plough, (fig. 7,) showing its construction and mode of operation. That it will answer the end designed we cannot doubt; and we hope that some enterprising mechanic in this country will manufacture a similar, or, judging from the usual results in such cases, an improved article for the use of American farmers. We know there are large sections of our country where such an implement would be invaluable. We condense from the remarks accompanying the engraving the following account of the benefits ascertained to result from its use.

First.—That by breaking up the soil to the depth of eighteen inches, (if for the sole purpose of planting trees twenty-four inches,) the tender roots of plants are enabled to descend to a greater depth, and derive their necessary nutriment from those parts of the subsoil, from which no nutriment was formerly derived; in addition to which, air and moisture having more easy access to the roots of the plants, further nourishment is thereby afforded.

Second.—The work done by the subsoil plough, far exceeds trenching by the spade, as this plough only loosens and breaks the earth all around, without turning the bottom soil to the top, which in some if not in most cases would be injurious to vegetation. Plants in their infancy (like animals) require then more particularly, the best and most nutritious food. When the delicate roots have acquired a sufficient degree of strength, and the leaves are put forth, they will be enabled from the looseness of the subsoil to extend themselves in search of food, and will extract some from almost all soils. In the mean time the leaves are carrying on the organization of the juices and nutritive matters furnished by the roots. The distance that roots will penetrate under favorable circumstances is not generally understood. In Oxfordshire, the roots of some wheat sown in a filled up gravel pit, were traced nine feet into the ground, and the Society of Arts in London have a stalk of wheat preserved in a glass case with roots six feet long.

Thirdly.—By this deep tillage the rains will sink into the ground, and afford moisture to the deep roots of plants during the heats of summer; and the fields, as experience has shown, may be laid down without furrows, except perhaps in very strong lands; and by subsoil ploughing stagnant surface water will be prevented in most cases.

Fourth.—The deep tilling will enable farmers to raise, as in a garden, carrots, beets, and other tap-rooted plants, for which such soils without deep ploughing are altogether unsuitable. The carrot and the parsnep in some cases are to be preferred to turneps, as affording, with the beet, sweeter and more nutritious food for milch cows than the varieties of turnep do.

Fifth.—This ploughing is far preferable to trenching, or spading, or any other mode of moving the subsoil yet devised, as it is equally effectual, and may be done at one-fourth the expense. Four horses will it is likely be required for the deep plough, the first time of ploughing, and three afterwards, without the assistance of the first plough, which will, if the soil is very compact or gravelly hard-pan, be necessary at the first ploughing to turn off the upper stratum of soil as before mentioned. The plough is made of wrought iron, and well braced, as the pressure on the center of the beam is very great.

There is another reason, we think, why subsoil ploughing would be advantageous on the hard-pan soils of this country, intended for wheat, which is not noticed above, and which indeed would be inapplicable to a large part of England. In that country, with the exception of some parts of Scotland, the temperature rarely descends so low, as to endanger the freezing out of wheat in any soil, while in this country, the evil of freezing out, is the most formidable one the occupier of clay soils has to encounter; and this evil is constantly increasing on lands of which clay forms the principal ingredient, unless some method of counteracting it can be devised. For the reasons before given, we think subsoil ploughing will do this more effectually than any other method. By allowing the surface water to settle, the clayey part will not become so saturated, and of course frosts will have less effect than where the upper soil is nothing but paste. The roots of

autumn sown wheat will penetrate deeper into the earth and thus be better prepared to resist the lifting process of the spring frosts. And though soils so ploughed, will, in the course of a few years be closely settled together, yet each successive breaking of the soil, by admitting the introduction of the roots of plants, and the natural sinking of manures applied to the surface, will eventually convert the whole soil so stirred into good arable land, and give a depth sufficient for any of the ordinary purposes of agriculture. For ourselves, we think the subsoil plough promises greater advantages to the occupants of hard-pan or tenacious clay soils, than any system of culture yet devised for them; and we shall be pleased to hear that our farmers, where such a plough is needed, have made a trial of its virtues.

Aqueducts:—Wood—Cement.

Immediately on receiving the request of our correspondent "South Hill," relative to the duration of the several kinds of timber used for pump logs, and the best method of conveying water, we made application to a gentleman who we knew had much experience in such matters, and was well qualified to express an opinion on the topics alluded to. We knew too, that he had within a few years discarded the cumbrous and often failing wood aqueduct, for one made of cement, and that he was highly pleased with the change. Circumstances prevented our obtaining the information as soon as we could have wished, but we trust the delay has not been such as to render it useless even now.

Mr. Joel Hiscock of Tulley, Onondaga, informs us that his aqueduct was first laid with hemlock logs, and that he should prefer that timber to most others, as not imparting a bad taste to the water, and being perhaps as durable as any. As his passed through an orchard, and a clover field, he experienced great inconvenience from the roots of the trees or the plants (and clover he thinks the worst of any thing) penetrating the interior of the pump logs, and there throwing out such a multitude of fibrous shoots as wholly to impede the passage of the water. A root scarcely of the size of a hair penetrating by a joint of the logs, through which a pressure of ten feet could not force water, no sooner finds admittance than it speedily assumes a size and strength, which, as observed by Mr. Griggs, rarely fails of rendering the logs useless. After being down eleven or twelve years they failed from becoming rotten, as well as from the obstructions alluded to, and four years since he replaced them by an aqueduct of cement, which has answered every desired purpose, and promises the greatest degree of durability.

Several methods have been adopted for laying water proof lime aqueducts, each of which has its advocates, though with proper care, and a little experience perhaps, they all are equally successful in their object. Some form the mortar in pieces, some three or four feet in length, and forming the ends of the pieces in a suitable manner, the point of one is placed within the end of the other and made water tight by a luting of the same material. But perhaps the best method is to form the aqueduct in one continuous piece, completing it in the trench, and leaving it to harden where it is to lie. In this way, the danger which sometimes arises from the pieces being not properly bedded and pressing unequally, and which may cause them to break, is avoided.

The only reasonable danger of failure in the use of these aqueducts is the subjecting them to a great pressure of water before the cement has time to become consolidated; in which case a rupture at the greatest point of depression is apt to fallow. We have known two or three instances where such has been the result; but after proper time for hardening has elapsed, the cement assumed the firmness of stone, and can be relied on with the same confidence.

The spring from which Mr. H. draws his water is about forty rods from his house, and the descent is great, being as much as eighty or ninety feet. Apprehensive that injury might ensue from such a pressure, being about forty pounds on the square inch, when the water had descended within a few rods of his house, it was received in a small open reservoir, from which it is conducted by another tube to his residence. This latter tube is of lead; though had he understood the matter as he now does, he should have used cement throughout, as he greatly prefers it to lead, and it is altogether cheaper. By means of the reservoir the pressure on the aqueduct above is entirely taken off, and below it can only amount to the fall between the penstock and the reservoir.

The trench for the reception of the aqueduct, was made two feet in depth, which would place it beyond the danger of freezing, and of injury from the plough; and if passing beneath roads, prevent any danger from the concussion of wheel carriages or other heavy loads.

In preparing his mortar, Mr. H. does not wet up a large quantity at once. He thinks it is more manageable at first, than after being worked over, and can more readily be brought to the proper consistence. Something is depending on the quality of the lime and sand, in determining the proportion of each to be used in the mortar, but in ordinary cases the cement is about half and half, or equal parts of lime and sand. Clean, sharp sand, makes firmer cement than inferior sand, or that which contains much loam, and in making aqueducts the materials should be first rate.

The bottom of the trench, if practicable, should be kept dry; since though the cement will in time set under water, it will not harden so quickly, is liable to injury from the water before hardening, and the water renders it unpleasant laying the aqueduct.

In laying the cement for the aqueduct, the part which forms the bed is first covered to the requisite width with mortar, the thickness of the bed and the covering of the bore being regulated in some measure by the size of the bore used. Mr. H. has found that a covering of ⅜ths of an inch in thickness, well worked, is sufficient, where the bore is from three fourths of an inch to an inch; though a greater thickness it is evident would give more firmness and strength to the work.

On this bed so laid, is placed a round stick or rod turned perfectly smooth and true, two feet in length, and of the diameter desired for the water course. Over this, and well worked down with a trowel, the cement is placed, and when sufficiently covered is drawn along part of its length, and an additional covering is put on. In order to prevent the contraction of the bore before it has time to harden the cement, Mr. H. makes use of a very simple contrivance. The above described rod over which he lays the mortar, is perforated from end to end with a hole which admits the passage of a strong cord. To this cord is attached a piece of wood ten inches in length, turned very smooth, a little tapering at each end, and as near as possible of the same size as the rod. This piece of wood, secured by the string passing through the rod, remains in the rear as the work proceeds for a few feet, say two or three, and is drawn forwards as is necessary from the progress of the work. As the cement acquires firmness very quickly, the effect of this piece of wood is to render the bore of uniform size, and leave it in a perfectly smooth state for the passage of the water. Some little skill is necessary in the management of this finisher of the bore, since if left too far in the rear or until the mortar becomes too firm, the drawing forwards is sometimes difficult and may crack the cement. Should, however, this occur, a little of the fresh mortar applied externally and well smoothed down, will prevent danger. He proceeds in this way until the whole work is constructed. He makes the bore of the aqueduct near the spring larger for a rod or two, that the entrance of the water may be effected more easily.

In the case of his own works, the connection, as we have seen, between the aqueduct and the penstock for delivery of the water, is effected by a lead pipe. He has however constructed several, in which no lead was used, but the water was delivered at once from the cement aqueduct, to the upright penstock. This was done by the insertion of a hollow tube of the proper bore and length into the penstock, and then covering this with the cement, thus connecting it with the main work. When this is done, however, great care must be taken to have the upright post for the delivery of the water secured beyond the possibility of motion, as the slightest movement would either loosen the tube, or fracture the aqueduct, most probably the latter.

Mr. H. had occasion to take out a piece of cement pipe after it had been in use three or four years, and found it to resemble common sandstone in hardness; and it is his opinion, that with well washed, fine sand, grindstones of good quality might be in this way manufactured.

Where there happened to be slight elevations to overcome in conducting water, Mr. H. thinks all danger of the tube bursting at the lowest point of depression would be avoided, by letting the first coat of cement become firm, and then covering it with another, well worked down with the trowel, and increasing in this way the number of coats in proportion to the pressure felt, and at the parts most exposed to danger from this source.

In constructing his aqueduct, Mr. H. at the close of each days work allowed the water from the spring to flow through the completed part; only taking the precaution to insert the point of a wooden conductor into the lower end of the bore, so as not to expose that part to the effect of a current of water, before the cement had hardened. As after the mortar has set, and become firm enough to prevent washing by water, this element can do no injury, it may be convenient in situations where no pressure upon the new structure can be exerted, to let the water pass from the spring in this way.

Something of course must be allowed for convenience of location, nature of the trench, goodness of materials, &c., but in ordinary cases Mr. H. is able to lay from 8 to 10 rods a day of inch bore aqueduct, and from 12 to 14 rods of ¾ inch do. Lime can be procured at the mills in Manlius or Jamesville for from 14 to 18 cents per bushel, average 16 cents. If the sand costs 6 cents a bushel, the materials for a rod of pipe would cost 22 cents; the labor of laying the mortar is estimated by Mr. H. at $1,50 a day or 12 cents a rod, or the cost of materials and laying would be 34 cents per rod. If any other material, such as lead or wood is used, the labor for making the trench, covering, and incidental expenses, would be not far from the same as for cement, while the cost of the aqueduct itself would be much greater. Lead pipe will cost from 10 to 14 shillings a rod, according to its size and weight, and wood pipe, including the timber, not less than 75 cents a rod. On the score of cheapness then, the balance is greatly in favor of the cement, and as to durability there can be no comparison.

A bore of three fourths of an inch will deliver the necessary quantity of water for a family, stock of cattle, cooking, steaming, &c., though where the current was trifling, an inch might be preferable. Mr. H. found that the absorption of water by his logs was so considerable, that during the summer his spring was hardly sufficient to supply the demand. Since using cement, he always has water in abundance. Mr. Hiscock's spring was pure soft water, and it has suffered no deterioration in consequence of conveyance in these, what may be called, limestone tubes. It may be added here, that the smaller the bore the less the labor of laying, the danger of rupture is greatly decreased, and as Mr. Griggs found a pipe of half an inch supply plenty of water for his purposes, it is probable few farms or dwellings will find a greater bore than three fourths necessary.

On this subject we have gone more than usual into detail, that those who choose, may make the experiment of conveying water in such acqueducts, without employing others to do the work for them. If, on any point, however, we have not been sufficiently explicit, we have Mr. Hiscock's permission to refer those who wish works of this kind to him, (if by letter post paid,) at Vesper P. O. town of Tully, Onondaga Co.

☞ The above has been waiting for insertion some weeks. We have also, ready for publication, replies to several other inquiries, which will be published as fast as we can make room.

☞ There seems to have been a misunderstanding in relation to the arrangements for furnishing this paper a copy of the proceedings of the late Agricultural meetings at Albany. We stated on the 24th ult., on the authority of one of the committee of publication, that to save the necessity of making a duplicate copy, arrange-

ments were made with the publisher of the Cultivator, to have the proceedings "immediately put in type, and as fast as so set up, to send proof-slips to this paper." We have, however, since received a letter from Judge Buel, in which he informs us that he did not so understand the arrangement, and that he did not premise to send us proof-slips. As he understood the arrangement, he was only to send us one of the first impressions, after he got his paper to press, which was promptly done.

Query No. 4.---Planting Corn.

"It is not sufficiently known to farmers how thick corn should be planted, and how the seed should be distributed. And yet such knowledge is very important. The last season I had my corn rows 3½ feet apart, and planted the hills 2½ feet apart on the rows, allowing 4 stalks to grow in each hill. The variety was a 12 rowed yellow, the same as was introduced here many years since by the Board of Agriculture. At harvest time, it appeared to me, there could be no mistake in supposing I had injured my crop by planting too thick. Yet my planting was not thicker than Judge Buel practices with great success—not near so thick, as, according to Mr. Clark's experiments, corn should be planted, in order to produce the greatest crop. Can more light be gathered around this subject?" A FARMER.

With our correspondent, we think the decision of this question must be left to experiment; and a comparison of the records of these would probably be the most satisfactory answer the query could receive; and fortunately, owing to agricultural periodicals, the farmer is always at liberty to consult and compare such records for himself. There are some things, however, which should always be kept in mind when the proper distance of planting corn is under consideration. Such things are, the variety, its proper climate, and the nature of the soil.

Some varieties of corn have a much larger growth than others, and consequently require more room in order to arrive at maturity. Take for instance, the kind spoken of by our correspondent, or the Dutton corn, both of which are twelve rowed large eared varieties; and the golden Sioux, or the little Canadian, both small varieties; and it is evident that the former will require more space than the latter. The corn too of a southern or south-western region, growing much more tall and luxuriant, than varieties suitable to our climate, requires to be planted further apart in proportion. In the southern states, four by six feet is not unusual. On the nature of the soil also much is depending. A warm dry soil, and such are the most suitable for corn, will admit of closer planting than a cold moist one, which requires the direct rays of the sun on its surface to promote vegetation.

The experiments recorded seem to agree with the opinions here advanced, and we shall give a number selected from various sources; but principally from the 'Genesee,' and the 'New England,' Farmers.

H. Sprague reported in the N. E. Farmer for 1832, two hundred and two bushels and twenty-two quarts of corn, from one acre and 136 rods of land. The hills were planted at 3½ feet distance, and from 5 to 7 kernels were put in a hill. The number of stalks left in each hill is not stated.

The experiment of Mr. Clark, of Northampton, (see Gen. Farmer, vol. 5, page 170,) embraced 4 distances, and resulted as follows:—rows 3½ feet apart produced at the rate of 44 bushels 57 lbs. per acre; rows 3 feet apart. 51 bushels 49 lbs. to the acre; rows 2 feet 9 inches apart, gave 55 bushels 45 lbs. to the acre; and rows 2½ feet apart yielded 57 bushels 36 lbs. per acre.

Mr. Brewster's crop, reported in the Cultivator for 1835, was planted in hills 3 feet apart, the seed put in, 4 in a hill, and one foot apart. The yield was at the rate of 105 bushels an acre.

In a letter to Judge Buel, Earl Stimson of Galway, says, that in 1833 he planted a field of 4 acres, 2 feet 8 inches apart; that he weighed the corn and stalks on an acre, and found 38,000 pounds, and 26,000 ears. The quantity of corn was not exactly ascertained, but he thought it equal to 150 or 160 bushels an acre.

In the N. E. Farmer for 1836, is the report of Mr. Lathrop, who says, that on the 13th of May he planted one acre and twelve rods of ground, the rows 3½ feet apart, and the hills in the rows 2 feet; with three stalks left in a hill. The product was 224 bushels of ears of good sound corn.

In 1831, Mr. Butler of Chenango Co. planted an acre of corn in rows 3½ feet apart; the plants standing singly in the rows from 12 to 13 inches apart. The acre yielded 130 bushels of shelled corn.

Such extracts might be multiplied to almost any extent, but these are sufficient to show that the crop of corn is usually in proportion to the number of plants on an acre, unless, owing to the causes above enumerated, the ground is overstocked, when there must of course be a failure. The finest field of corn we have ever seen, was planted in rows 3 feet apart, and the hills in the rows 18 inches, with two stalks in a hill. The product we did not ascertain. But when corn is planted in this way, or like drills, the rows should run north and south, that the soil and the plants may both feel the influence of the sun's rays to the greatest possible extent. There is, however, abundant room remaining for experiment in the culture of corn, embracing the best methods of manuring, planting, tilling and harvesting this valuable crop. In making reports on the cultivation of particular crops, much advantage would ensue, if the writers would include a description of the quality of the soil on which they were grown. This would assist the reader in determining whether the course adopted would be a proper one for him, as nothing is more certain than that different soils must have very different treatment to ensure success.

Bloody Murrain.

We have received the following query from A. B. ALLEN, Esq., of Buffalo;—'Is there any cure or preventive of Bloody Murrain, or kill for bloodsuckers that cattle swallow in their drink, and that prey upon their vitals and at last destroy them?"

Several notices of the disease so called, and its cause, may be found in former volumes of the Farmer, particularly pages 67, 130 and 150 of vol. 4th—and in the 6th vol. at page 81 and 229 may be found directions from correspondents for the cure. At page 81, a subscriber from Orleans says, speaking of a beast violently attacked, "I remembered to have heard that the green leaves of the Mullein steeped in milk was a certain remedy. I lost no time until I found some of the leaves, having to dig under the snow for them. They were steeped in new milk, and about 3 quarts of the tea, poured off without straining, given to the ox, which produced an immediate cure. I have since known a cow cured in the same way."

At page 229, Mr. Priestman communicates the following. "I have the following from a friend as a cure for the bloody murrain in cattle, which has succeeded well in several cases. Take a peice of poke root as big as a man's fist, supposed to be half a pound, for a common cow, cut it fine, add two quarts of water, boil it to one quart, and pour it down when warm. The dose may be repeated once a day for two or three days until the cure is complete."

An examination of some of the best works on cattle and their diseases, such as Lawrence's Grazier's Guide, and the one published by the English Society of Useful Knowledge, shows that the disease termed by us, bloody murrain, and traced very satisfactorily to the leech or bloodsuckers of our stagnant waters, is unknown to them. The murrain described by them is at first inflammatory, ending like the plague in man, in swellings under the skin of which the breaking is considered a favorable symptom. In the early stages bleeding is recommended, followed in most cases by purgatives, though in some cases it is attended with diarrhea that requires astringent remedies. In combatting the pustular or sloughing gangrenous state, the chloride of lime is recommended for an external application, not confined to the ulcerated parts alone, but plentifully sprinkled over and about the beast.

As a '*preventive*'—and we should have much more faith in this than in any '*cures*' that have yet been suggested from any quarter,—the exclusion of animals from water that contains the destructive cause, must be effectual. That such would be the result, the following conclusively proves. "A farmer in Madison, Ohio, had lost several of his finest cattle, by this disease, and on opening them he found leeches in their stomachs, much swollen by the blood they had extracted, and it was also found that leeches were living in the water at which the cattle were in the habit of drinking. Believing that this was the cause of the disease, he changed the water, and in future only gave them that which was pure, and for three years his stock has not been troubled with that disease." Where the leech exists only in the stomach, the doses reccomended above might destroy them, but when as is sometimes the case, they find their way to the liver and other viscera, the case may be considered mostly hopeless. The reason why animals that die with this disease are found filled with blood, is probably owing to the blood continuing to flow from the orifices made by the leech after the animal itself is gorged; an occurrence not unusual when applied for medical purposes to the human body. In such cases, it is evident, astringents, by having a tendency to stop the flow of blood, might save the animal attacked; but pure water, by shutting away the cause of mischief, can alone be relied on as the effectual remedy. We shall be much pleased to hear from any of our friends who have had experience on the subject of Mr. Allen's queries; as many valuable animals yearly fall victims to this disease, especially in those parts of our country lying low, and exposed to the influence of stagnant pools.

ROADS.

Next to skill and taste in farming, there is nothing more decidedly pleasing in a country than good roads. It is indeed a material indication of the intelligence, good feeling, and prosperity, of any commuuity, to find the roads of the district in fine condition, and prepared in a way to make the transportation of articles easy, and locomotion a pleasure instead of a pain. Though there are few sections of country in which roads are more used, there are but few in which, for a large part of the year, notwithstanding the annual expence put upon them, that are in a worse or more impassable condition than in Western New-York. This may be, and undoubtedly is, in a great measure owing to the nature of the soil in which our roads are constructed. Rich, deep, and friable, in most instances, containing a large proportion of clay, unless suitable precautions are adopted in the formation of roads, they are easily, by the action of wheels and feet, cut into ruts, or poached into mortar. In addition to these causes, is the action of our severe winter frosts, which have the effect, where the roads are not thoroughly drained, of loosening them, however hard the surface may be made during the summer. But though these potent causes are operating against good roads, there are others equally or more effectual to be found in the imperfect manner in which they are made, and the incorrect principles adopted in their construction.

Various efforts have been made, by calling public attention to this subject, to correct the evils that are every where felt and acknowledged, but so far with little effect. Old habits and systems of operation in making roads as well as in every thing else, are difficult things to break up and overcome; and if, as is asserted in one of the Agricultural Surveys, the farmers of one of the counties of England are so attached to old habits as to prefer "selling wheat to old customers at low prices, to high prices from new purchasers," no reason can be assigned why habit should not induce farmers to use poor roads, in preference to good ones; or at least to be satisfied with them.

Something, however, has been accomplished, chiefly by the persevering activity and practical energy of a few spirited individuals. Much information has been given to the public on the subject, and some specimens of roads made on principles better adapted to permanence; hardness, and smoothness, have been exhibited. A bill, intended to produce a beneficial reform in road making and management, was introduced into the Legislature by Mr. Paker of Onondaga Co. at the last session of that body, but owing to the pressure of business it was not definitely acted upon. We are pleased to learn that petitions for the passage of that, or a similar bill, are in circulation in many parts of the state, and we cannot doubt that a law properly matured, and having a tendency to do away the evils that are inherent in the present system would be hailed by a great majority of the citizens of this state. In acting on this subject, there is one consideration that should not be without its weight;—whatever may be done, it is scarcely possible a system can be adopted worse than the present; and in such a case the chances are always for the better.

COMMUNICATIONS.

Making Manure.

Mr. Tucker—There has been a great deal written respecting manures; and many of the communications were very interesting to me as a farmer. Our farmers need a jog at their elbow daily to be more saving of their manure, and also to increase its quantity and quality; and as you are frequently calling on me and others in your papers to inform you what we are about, I will give you a statement of a small experiment that I tried last year. As I raised but little grain, and therefore had but little straw for litter, and as I had heard of leaves being used for manure, I resorted to that experiment. In the fall, after the leaves fell in the woods, I went to drawing them to my barn and hog-pen. I put a number of loads in my yard. Those I did not succeed so well with, as the wind blew part of them away before the cattle incorporated them with the manure; but what I put in my hog-pen did beyond my expectations. I put them into my hog-pen nearly twelve inches thick, and let the hogs lay in them until they had got them so mixed with their manure that they would not blow away; then threw them out of the pen in a heap and put in more. I filled up a spare stable with leaves, and kept them till in the winter, to litter my stables and hog-pen. I put part of what was made in my hog-pen on my ruta baga patch, although it seemed to be almost all leaves. It did the best execution of any kind of manure that I used, and I tried a number of kinds. I do not speak of leaves as being better than other kinds of vegetables for that use, but to use them when others are not to be had; for our farmers little consider how much they lose in not having a plenty of litter in their barn-yard, stables and hog-pens. I have neighbors that have fatted eight or ten hogs this seven years past, and I never knew them save a load of manure from their hog-yard. I will make one more observation on manure and close. I have found by experience that where I use manure on my grass land, it pays well to put on plaster with it. I find that on some land plaster will do no good alone, and some other land will do but little better with manure alone, but using them together never fails of a good crop, and if the grass is cut early I have two crops in a year. The manure I think keeps the land rich, and the plaster in a dry season keeps it moist, two very essential points for a good crop of grass. Samuel Griggs.

Griggsport, February, 1838.

Hedging—Inquiries.

Dear Sir—I want some information concerning hedging, and I have looked in vain for it in the Genesee Farmer for the last two years.

In learning, I want to be taught the result of actual experiment, not theory—for I can theorize as well as others, and have found the results of it not always to correspond to actual practice, even when plausible.

In calling for information I cannot better convey an idea of what I want, than by stating that I am anxious to commence farming on the prairies of Illinois, in the southern, or at most not farther north than the middle part. But unless fences can be found speedily and economically in some manner, an insuperable barrier arises.

Therefore I would ask answers to the following questions, which perhaps you may answer off-hand, from correct information already acquired; if not, or even if you do, I would ask any practical operator in Illinois, or in a corresponding latitude, to corroborate or elucidate your statements:—

1st. What is the most economical manner of fencing the prairies of Illinois, from the middle to the southern part?

2d. What kind of tree or shrub succeeds best for hedging?

3d. What will be the expense per rod of growing the hedge, and what will be the annual expense of maintaining it?

4th. Has any machine been constructed and put in operation to ditch and embank by horse or ox power?

5th. What is the expense of such machine, its power of performance, and the probable utility of said ditch and embankment.

From the great variety of soil and climate in our widely extended country, it is desirable to have the result of all experiments near the desired location. A hedge that may succeed well in New-York or Pennsylvania may not be available on the prairies of Illinois.

6th. If hedging succeeds well, I should like to learn whether it be necessary to protect it in its infancy by another fence, and the nature of the country will admit of it?

7th. Where can the seed or cuttings of suitable plants be obtained for growing hedges?

Any other information not elicited by the questions will be gratefully received, by many persons intending to emigrate, as well as your obedient servant. L. R.

P. S. It may be that you have no information from that quarter called for. If so, be so good as to state succinctly what succeeds best in like latitude in our more eastern and older settled States, giving answers to the questions as regards a more eastern longitude of like latitude.

Drying of Apples.

I have never seen anything in print that has come to my experience in drying apples. That delicious fruit is apt to get wormy in the warm season, and consequently become unfit for use. I have myself been afflicted in this way, and lost the benefit of my fruit which I had anticipated enjoying; but there has a remedy occurred to me, whereby dried apples may be kept from year to year; which is of vast importance, since every few years apples and almost all other kinds of fruit are cut off by bad seasons. At such times, dried apples kept over, would be very acceptable. The remedy is, not dry your apples until the flies have disappeared, for as sure as they can have access to them, they will leave the nit for the worm. The experiment was accidental. I had occasion to dry some apples after the weather became cold, and I kept the late dried apples though the summer without a worm infesting them, while the others became wormy.

The dried apples must be kept in a tight chest or sack.

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Wintering of Shoats or Swine.

It has been formerly an irksome task to winter shoats. Never until very recently have I entered the winter with any confidence of having them much, if any, heavier in the spring than when winter commenced; as my custom has been according to the common custom of the majority of the farmers under the old system; that was to feed them house slops with a little raw bran and a few raw potatoes, and with this, when the weather became cold, they would draw up into a little bunch, their hair would turn towards their heads, and they would cry wee, and well they might, for the food was not sufficient to strengthen them against the severe blasts of winter.—Having read much of the good effects of cooking food for animals, I have been induced to try the experiment. Accordingly I set a kettle in an arch by the side of my hog-pen, close to the trough, in a very convenient manner, making a house over it so as to keep all my apparatus dry. In this way I fatted my pork on potatoes and bran, with a little oat and pea meal, faster than ever I did on corn; besides my kettle is ready, and in the place of feeding raw food as before, as often as I wish I boil a kettle of potatoes, boiling in my bran, and feeding it with my house slops; and instead of their looking as they formerly did, they keep sleek and fat, growing as fast as at any season of the year. When the weather is cold enough to freeze, the cooked food being always in the kettle, all that is necessary is to take a few coals from the fire in the house and put them under the kettle twice or thrice a day, adding a little fuel, which will keep the swill from freezing. I take care to keep them with a good warm bed.

N. B. I mean that I boil the potatoes and add the bran when I mash them up.

I have nothing more at present, except one beet that grew on my farm last summer, which was two feet five inches long; the soil was little else but sand which was washed up by a creek.

Yours with respect, E. S.

Boston, N. Y., Feb. 26, 1838.

HOOF-AIL.

Esteemed Friend—Having seen in several of the late numbers of the Genesee Farmer, an account of a prevailing disease among cattle called hoof-ail, with a request to be informed of a remedy, and as there are several different diseases that may with some propriety bear that name, I will endeavor to describe the one to which I allude, so that it cannot be mistaken. As far as I have observed it attacks only the hind feet, generally one first, and in a few days after the other, and sometimes only one will be infected. The first symptom of an attack is, they begin to kick or shake their feet as cattle frequently do in very cold weather, with this difference, they will continue so to do frequently for a day or two at short intervals. At this time, if the foot is examined, it will be found to begin to swell and inflame; there will also be found at the heel at the junction of the hoof, a hard bunch or kernel about the size of a walnut, and the animal will begin to grow lame, and frequently the swelling will reach above the gambrel joint, producing severe pain, and as the disease progresses, the skin above the fetlock about the width of a man's hand will become tight like a bandage; the swelling in the ankle and foot will subside and the foot become cold, all circulation ceasing, while the leg above will continue badly inflamed; the skin in spots will become a hard crust or scab, interspersed with cracks; the heel of the foot also frequently cracks. When the disorder has progressed thus far the best remedy is to knock them in the head, for their feet will soon be off at the ankle joint. A year ago, not far from this time, one of my oxen was attacked with the above described disease; after him all the neat stock I had except one, one after another. I had heard of cases of the disease, and made inquiry for a remedy, but was uniformly told there was none, that it was fatal wherever it made an attack, which I did not like to believe; hence I tried every thing which I could think of that I thought would have any effect, but to little if any purpose; at last I hit upon the following, which I have never known to fail where it was seasonably applied, and by which I saved all mine except two, which were too far advanced before it was applied. First bleed in the diseased foot or feet, as the case may be, in each claw at the upper edge of the hoof, as you would a horse for founder; if the first bleeding does not answer, repeat it after two or three days, and bathe the parts inflamed once a day with spirits of turpentine; if the disease has so far advanced before bleeding as to maturate at the toe, it will be necessary in addition to cut off the toes with a chisel to give it vent, or otherwise open them on the underside with a knife; if this is not done the hoof will come off.

Skaneatelas, 2d mo. 21st, 1838. Adin T. Cory.

P. S. I have never known but one instance in which a second bleeding was necessary; but I have known several where it was necessary to cut off the toes or open them otherwise. Since writing the above, the Farmer of the 10th instant came to hand, in which an article written by J. C. Hathaway, attributes the origin of the disease to want of exercise, filthy stables and bad yards, but this could not have been the case with mine, as I had three oxen attacked out of four, which had been regularly worked through the fall and winter almost every day that the weather would permit, first days excepted; they were well fed and in fine order, stables cleaned every day and well bedded with dry straw; my yard is on a dry spot and been regularly cleaned every spring since I owned a yard, and the fall previous well littered by early threshing; watering place good. I can assign the malady to no particular cause, unless it be this, the clover had been considerably killed in my meadow by the winter, and spear grass took its place, which the season previous was heavily loaded with something resembling smut or spur.

red rye, and I have known several instances where cattle have been fed on such hay, that have been attacked with the disease during the time they fed on it; whether it is the cause or not, I must leave for those that are better qualified to judge. A. T. C.

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Mr. Tucker—After waiting for some time to see what would be said by others on this subject, I find in No. 7 of the Farmer, much to discountenance the opinion I had formed as to the cause of this complaint. It has been my opinion, with Agricola, that unwholesome grasses and hay made of them, was the cause of the hoof-ail, but the statements given by Dr. Coventry seem almost conclusively against it. What I have in view, is to state a case, and the only one that has come under my own observation. It may be more than twenty years, that a stock of cows on a farm adjoining mine was attacked with this complaint, which proved very destructive; but few if any escaped, and most of them died. I do not remember that any cure was attempted, or any cause assigned but that of the quality of the hay on which they had been fed through the winter. This farm had been long subjected to the worst of management; the meadows were spoiled by stagnant water of a greasy copperish hue, which imparted to the grass its color. On such grounds the cattle had pastured through the fall season, and on such hay they had subsisted in the winter. Such as did live were removed in the spring to give place to new occupants. I cannot say what were their after condition. It is worthy of remark, that this was the first instance known of the disease on the farm, although it had been subject to like management for years. Much however may depend on the season; in this case it might have been unusually hot and humid. This farm was soon after brought under good improvement, and a case of hoof-ail has not since occurred.

If I was to express an opinion, after all I have seen and read, I should say that freezing is not the principal cause, but that a predisposition to it from other causes, by obstructing the ordinary circulation of blood in the feet, would render them more liable to become frozen. That frost is an active agent in bringing the disease to a rapid and fatal issue, I have not the least doubt. I. W.

Lansingburgh, March 8, 1838.

Manufacture of Beet Root Sugar.

Mr. Tucker—A few weeks since I gave you an account of my crops of Sugar Beets. I furnished Doct. Hall, of this town, with 100 lbs. of the beets, which he has converted into Sugar. He gives the following as the result of his experiment: Hiram Ferry.

Northampton, Mass. March 14, 1837.

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At the solicitation of several gentlemen, I was induced, a few weeks since, to make some experiments with the Sugar Beet. The results, I am happy to say, were satisfactory; and a quantity of very fine sugar was obtained. This subject is one which has of late excited considerable attention, especially among our agriculturists, and I presume many of them will be desirous of obtaining any additional information in relation to it, and of knowing what results may be ultimately expected from its cultivation.

In making experiments for the first time in any of the arts, many difficulties are encountered which on subsequent trials would not be called difficulties; for once met and overcome they are formidable no longer.

It is not my intention at present, to describe the process by which Beet Sugar is manufactured; my only object is to inform those who are interested in this subject, *that Sugar can be extracted from the beet*—and that *the process is comparatively a simple one.*

Many individuals among us believe that, in this country at least, Beet Sugar cannot be manufactured. We are told that "the process is complicated," and that "few understand it." It is true there are few, if any individuals among us, who have either tried the experiment, or seen the process of extracting sugar from the beet—yet *it is not difficult to understand.* As to the process being a complicated one, I have only to say that there *necessarily* exists in the books which treat of this subject, a want of precision and minuteness of detail in relation to the required manipulations; and the experimentalist must, on many occasions rely entirely on his own judgment; yet the directions are, I think, far more complicated than is necessary. The process of extracting sugar from the beet was obtained, as we all know, from the French, and the process by which a Frenchman does *any thing* is complicated. The "method" is essentially different from those adopted in extracting Sugar from other articles; yet most of the difficulties are *imaginary*, and after one or two trials, will entirely vanish and the mode of proceeding become perfectly familiar. The chemical part of the process, which is thought to be the most difficult, is in reality very simple—and if the Peasantry all over France, have skill enough to go through the required manipulations, I am very sure that the New England farmer, if he be not more than half a "Yankee," can readily acquire the necessary information, and can successfully compete with them in the manufacture of this article.

It has been objected to the beet sugar that it retains the originally flavor of the beet. In the experiments made, I found that each clarrification of the juice diminished this taste very materially—I should think *one half*—and in the process of refining, it is entirely lost.

C. A. Hall.

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Friend Tucker—If the following receipts are worthy a place in the Farmer, please insert them; if not lay them aside.

For White Wash.

Take newly burnt lime, 2 qts., the whitest pieces are the best, put them in a pail or kettle, pour boiling water on it and stir it often, keep adding hot water to keep it fluid until nearly done slacking, then take a tea cup full of rice and boil it to a jelly, filter through linen or cotton cloth, add a part of it at first, the remainder while using; but if you wish for yellow, take horse radish leaves, half a pailfull, boil them as if for greens, filter and add the juice to the foregoing composition, and it will be a beautiful yellow.

ANOTHER.

½ lb. Crome yellow, pulverized very fine;
2 lbs. Spanish white;
1 lb. Yellow ochre;

Put these into a pail, add 2 qts. skimmed milk, stir it until thoroughly incorporated, then add milk until thin enough for use; apply it with a whitewash brush.

FOR GREEN.

1 oz. Prussian blue, pulverized extremely fine;
½ lb. Crome yellow;
2 lbs. Spanish white;

Add skimmed milk enough for use.

—

Cement for China and Earthen.

Take gum shellac and melt it and make it into rolls, then heat the earthen until hot enough to melt the gum, then apply the gum to the edges of the earthen, put them together while hot and hold them until cooled a little, and it is fit for use.

Glass is best mended with white lead and linseed oil, ground into a paste.

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The Monthly Genesee Farmer contains an inquiry what kind of timber is best for conveying water. I answer, tamerack from 6 to 9 inches diameter in dry ground, for wet ground a less size will do. One peculiar trait in them is, the augur inclines to the heart of the log. I have frequently bored from 30 to 50 rods, without wasting a foot. Pine is next best; the heart of the logs should be at least 4 inches in diameter at the top end, not including the sap. Chestnut I never used much; one great failing in them is their liability to check at the end. Hemlock is good, but they are difficult to bore, and are apt to be shaky at the ends. Black ash will do, although not very good. Basswood is not good unless the logs are constantly full of water, or in very wet ground. I have known them last 14 years in dry ground, when coated with leached ashes; when covered with dirt only, 5 or 6 years, and when laid in ground constantly wet, they will last many years. Large logs split are better than small round logs for basswood, but other timber is the reverse. I always apply tar to the joints before or after laying them down. The best time to get tamarack logs is when the swamps are frozen hard enough to bare up.

Marcellus, Feb. 22, 1838. A. Willson.

Management of Hard-Pan Soils.

Protesting as heretofore against calling "hard-pan lands," universally or even generally, "clayey soils," and especially "indurated clay," than which nothing can be more palpably unjust, we shall continue our investigations:

The land upon which our experience has been obtained, was, less than twenty-five years ago, a wilderness; and when first cleared from the forest, was covered with cradle knolls, the intervals or vallies between them occupying about an equal extent of the surface; the vallies being thus banked up on every side, were receptacles for all the rain that descended, and when ploughed, for the first three or four times, were necessarily filled with the vegetable mould thrown into them from the knolls; the latter being thus stripped of all the surface, were unfit for the production of crops; and being only dug to a level with the surrounding land, continued to prevent the water from escaping out of the vallies, and occasioned the destruction of what grew there. We had frequently heard farmers in the neighborhood say, that the more the land was ploughed the better it became, and this opinion agreeing with the most rational deductions we could make, induced us to plough it frequently and plough it deep, while we could find crops to grow and manure to feed them. The result has justified this expense tenfold. In a few years the soil was so well mixed, and the level or plane between the upper and subsoil was made so even, that the roots had a regular and sufficient depth to spread in, and the water was never found stagnating or accumulating in small ponds upon the ground. We had also been frequently told that the hard-pan, when exposed for a few years to the operations of frost, rain and solar heat, would become as fertile as the loamy surface. In order to test the accuracy of this statement, as well as to accomplish other objects connected with a knowledge of its constituents, we caused an analysis to be made of portions of both. We had often heard the hard-pan compared to marl, without exciting any other conviction than that those who thought so, knew little of the nature of either; but we were surprised to find that the hard-pan contained nearly double the quantity of the carbonate of lime that was found in the vegetable mould; that it also contained nine per cent more silica, and that the latter substance constituted nearly three fourths of it, or 74 per cent. Both parcels were taken from a state of nature, the hard-pan two feet, and the surface soil, one foot, from the top of the ground. The whole analysis served to show that an additional quantity of the carbonate of lime would approach very near to the deposite of marl found in Orange and Ulster counties, and would indubitably increase the value of the barn-yard manure that was mixed with the earth; it also confirmed our previous belief that the sub-soil or hard-pan, throughout the whole extent of the head waters of the Susquehanna, even that which seems on a superficial examination to approach the nearest to "indurated clay," is, in a greater or less degree, a mixture of conglutinated clay and sand with the *reliquæ* of shells, vegetables and marine animals. Impressions of fish, of fern, of snakes, of insects, and leaves of various descriptions, are universal through the stones and rocks of this region; and in many places, particularly along the Wyalusing, the Wysox, the Apolacon, and other streams, they prevail to such an extent that the inhabitants quarry and burn them for lime. Calcination produces in some instances what is called marl lime; in others shell lime, and in many more, a mixture of sand and lime, colored with the oxyde of iron called "dark lime," all of which have been long used for plas-

tering, as well as for applications to land. The remark that long manure has but a very temporary influence upon these lands, is rendered by these facts manifestly among the mistakes that scientific men sometimes commit; and apart from any scientific conclusions, the universal experience of the country proves that there is hardly any lands upon which its influence is so long apparent, and where the lime has been applied, the tenacity with which it retains manure has almost become a proverb.

We have not adverted to the uniform experience of all the farmers throughout this extensive region, with regard to its productiveness in peas and oats, altho' this alone furnishes satisfactory evidence that the doctrine of rotation, of frequently exposing the land to atmospheric influence, of pulverising it with the plough, of increasing its absorbent and diminishing its cohesive power, is not a partial or local canon for the government of sectional husbandmen, but a universal statute of nature—

"An institute of laws eternal, whose unaltered page"
"No time can change, no copier can corrupt."

And we had fondly anticipated, (until the article upon the management of hard-pan soil made its advent,) that the doctrine of raising grasses without ploughing, of abandoning clover, which we have used for so many years as an ameliorating crop, and substituting timothy and red top, of rejecting tap and bulbous rooted vegetables for lateral and fibrous rooted plants, had been placed among the practices of by-gone days.

We hope, however, that we may not be misunderstood; that it will not be supposed we intend to deny all the positions advanced in the controverted article. Every man, with a reasoning faculty, must admit that wet lands require draining, and that some spots in almost every country, such as are usually selected for brick-yards, potter's clay, and earthern ware manufactories, require a large admixture of other materials before they can be made productive by manuring and ploughing. The error of the article appears to lie in not discriminating between the soils that require such remedies and those that do not; we distinctly recollect when the generation preceding us thought the Atlantic region over-peopled, and that no refuge remained for the superabundant population but western New-York. Our predecessors returned from exploring Cayuga County as unsuccesssful adventurers now return from Michigan, describing it as aguish bogs and marshes, unfitted by a clayey subsoil for cultivation, and as cradle knolls and hard-pan under them. But now, when the country has been cleared of its forests, when evaporation and absorption have been increased by constant cultivation, when the cradle knolls have been leveled and the whole well mixed, it has become, in the hands of good farmers, as fertile as any other on the globe.

We have thus far examined this subject solely by the light of our own experience. It has taught us that hard-pan soils are not generally clayey soils, unless from ten to fifteen per cent of the analysis constitutes a clayey soil—that like all other lands they partake of every shade and degree of fertility—that they universally improve by ploughing, mixing, and manuring, and that the increase is generally proportional to the goodness of the tillage and the quantity of work and manure bestowed upon them—that the hard-pan, as well as the surface, possesses very different constituents in different locations—that wherever the former contains more carbonate of lime than the latter, notwithstanding its apparent hardness and impenetrability, mixing them with the plough, and even by trenching, is beneficial—that where the surface is richest in calcareous matter, the hard-pan is better to lie deep: and we earnestly recommend to every one of our readers, who may feel interested in the improvement of these lands, to obtain a scientific analysis of both the soil and subsoil. They will be rarely found to contain more than 12 per cent. of alumine, generally from 6 to 9; and if they do not, it is a perversion of the language to call them "clayey lands," and much more so to call them "indurated clays"—that unless they contain as much as 30 per cent of clay, which may possibly be the case in about one instance out of a thousand, they are perfectly safe objects for cultivation and improvement. (a)

Being however well aware of the weight of authority deservedly attached to the name of the Genesee Farmer, we deem it respectful to its numerous readers to fortify our own experience by the judgment of more eminent men. We have sought in vain among the agricultural surveys of Great Britain, for any analogous description of soils, and especially such as in the Farmer are described under the cognomen of "hard-pan;" but we will take the position that the nearest kin to the family, are various kinds of clayey soils; and the English and German mode of managing them we shall now quote. After describing the different constituents found upon an analysis of different clayey soils, the author of the Agricultural Survey of East-Lothain, adds:

"In whatever manner these soils may be constituted, they invariably require greater power and labor to bring them into a condition proper for farming, than most other soils; they are in fact *naturally sterile*, (altho', not so *much so as sands*) from their adhering together in masses. When the seasons are favorable they are often lively and vigorous; when wet, the plants growing on them are inundated; and in a dry season the ground becomes so solid that the roots of plants cannot spread themselves in it: *But notwithstanding all this*, clay soils are thought to contain *more of the food of plants*, than almost any other kind whatever; as without much alteration they will produce good crops of grass, provided they are not fed too closely, nor cattle let in too early in the spring. In order to bring them *into tillage*, they should be altered by the admixture of such substances as tend to loosen and open the soil, and break the cohesion of its particles. When these objects are accomplished, the lands become highly valuable, RETAINING MANURE EXCELLENTLY, AND NEVER RETURNING TO ITS FORMER STATE OF BARRENNESS. *These sorts of soils are, therefore, capable of much improvement by a proper course of tillage husbandry, and a judicious application of suitable manures.* In regard to the manures, *pounded limestome, or lime sand and calcareous marl*, are the most useful for altering the texture; the best season for laying on is in winter, as it is only while the ground is frozen that teams can stir upon them; where these fossils cannot be obtained, where the vegetable principle is deficient, a mixture of dung and sea sand will contribute greatly to fertilize the ground, but the *application of lime alone* has in most instances been attended with complete success. Some farmers, however, disapprove of it, as not mixing intimately with the soil."*

"The thinner kinds of clayey lands are almost universally poor; the cold and unkind bottoms they are found upon, make them so naturally; such land is hardly adapted to bear much fatigue of the plough, summer or winter.'—'If it happen to be a wet season before seed time, the prospect of a crop is indeed unpromising; or if drouth comes on, it cannot fail of penetrating to the bottom of the furrow, in which case the grain perishes. The stronger sorts of these soils baffle the operations of the plough more than any other it encounters; (exactly the Farmer's description of pard-pan lands,) *the only friend that co-operates with it* in subduing them, is strong liming."†

Now if it were possible to select a combination of words and phrases more calculated than any other to support our notions of combining the lime and the plough, of uniting tillage with cattle husbandry; of pulverizing, clovering, and attenuating crops, we should think it were these. It may appear, however, paradoxical in us, after giving an analysis demonstrating so conclusively that hard-pans are not generally clays, that we should offer extracts of experiments on clays: we did indeed deem it essential to counteract the injurious effects of modern views upon clay as well as upon loam; but we have one upon loams from the same author that is equally confirmatory:

"For the more heavy and adhesive kinds' (of loams) 'a compost of effete lime and dung, or lime combined with pulverized bones, may be beneficially applied in such quantities as the tenacity or poverty of the land may direct. *When the argillaceous principle abounds, lime alone* may be spread to counteract the acidity and loosen the texture."‡

"In the county of Oxford, they find lime necessary on the yellow loams, which are wet and require draining; they are rarely productive in a natural state, but lime renders them very productive in oats, and prepares them for future wheat crops."* (b)

*Aricul. Sur. of East Lothain by Mr. Somerville, article Soil.
†Farmer's Magazine.
‡Somerville's Survey.

NOTES.

(a) We most cordially agree with our correspondent, as to the propriety of understanding the nature and constituent parts of what are called hard-pan lands, and indeed of all others brought under cultivation, as it is evident that without some good degree of certainty on these points, farming must be conducted at a very great disadvantage, and not in that skilful and correct manner which should be the desire of every cultivator to adopt. As an illustration of the propriety of this course, we may state that in England great loss has sometimes been sustained by farmers, from the expence of liming land, when other manures were required, lime already existing in abundance; and in this country no course of husbandry, having for its object the 'alteration' of soils, can be safely undertaken, without this first preparatory knowledge.

(b) We were perfectly aware of the existence of the paragraphs quoted by Holkham—and such might be multiplied to any extent from foreign authors—but should hardly have thought of adducing them as authority, on a question relating to what American farmers term hard-pan, that is, a subsoil composed of pebbles or fragments of argillaceous slate, cemented together by clay in a greater or less proportion. As, however, our correspondent has had the candor to admit that the two first extracts relate to a substance (clay) which he says he has 'demonstrated conclusively' does not exist to any considerable extent in hard-pan; so we shall only add, that the last refers to a kind of soil (loam) which no practical farmer ever thinks of classing with that material.

We are, notwithstanding, obliged to Holkham for the quotations, since, if they have, according to his showing, no reference to the kind of soil called hardpan, they are not the less valuable in proving the ameliorating effects of lime, and the necessity of paying more attention to its application.

*Encyclopedia, article, Soil.

January and February.

MR. TUCKER—I send you a few notes on the meteorology of the two past months, merely for the purpose of affording means of comparison with observations made by others. The place of observation is in the south part of the county of Onondaga, 15 miles south of the canal and from 700 to 1000 feet above the Seneca level.

Otisco, March 1, 1838. W. G.

January.—Average temperature of the month at 9 o'clock A. M. 26°. Average at 2 o'clock P. M. 32 degrees. Lowest recorded observation on the 31st, 5° below zero. Highest, on the 4th, 58° degrees. Range of thermometer 63°. Thermometer on the 31st, at 7 o'clock A. M. 8° below 0. No. of fair days, 13. Variable, 4. Snow 11 days. Quantity during the month 13 inches. Rain 4 days, quantity trifling.

February.—Average temperature of the month at 9 o'clock 9°. Average at 2 o'clock 14°. Lowest temperature recorded on the 3dand 15th, 1° above 0. Highest on the 8th, 35°. Range of thermometer in the month 34°. Thermometer on the 3d at 5 o'clock A. M. 5° below 0. No. of clear days 5. Variable 2. Cloudy 21. Brilliant Aurora, 22d. Depth of snow in the month 20 inches. Number of snowy days 15. No Rain.

The very moderate weather of January excited much notice in all parts of the country, the temperature exceeding that of almost any previous year. The frost was mostly out of the ground; in warm soils ploughing was performed to a considerable extent; the buds of the cherry and peach were much enlarged, so much so as to excite reasonable fears for the effect of the subsequent cold weather upon them; and in some sheltered situations the lilac began to show its leaves. That the same mild temperature extended far to the north is evident from the fact that no snowbirds made their appearance, unless a few scattering ones, until the 28th, when a strong wind and driving snow storm brought multitudes of these beautiful wanderers.

February has rather exceeded its usual character, in almost uniform severity. The ground has been covered with snow to the depth of nearly two feet, and with good sleighing, farmers have found it a favorable time to bring up their winter business, which, owing to the want of snow in January had fallen somewhat in arrear. Owing to the moderate weather of January, flocks and herds, unless they have received extra care, have suffered more than usual from the severe weather of February. It is during the spring months that the severest losses to the farmer usually occur, and there is no reason to suppose that the experience of the present year will form an exception.

What effect the open weather of January, followed by so low temperatures, will have on winter sown wheat remains to be seen. At the fall of the snows, however, it seemed to have received little injury, and if the spring should be favorable it is to be hoped it will escape the effects of the winter frosts. Farmers are beginning to appreciate the value of spring wheat, as a kind of dernier resort; and it seems to be an established,though somewhat curious, fact, that the best soils for winter wheat, will not in ordinary cases produce as much spring wheat as soils on which the former at best is but an uncertain crop. The increased attention to spring wheat, is a favorable omen, as it will add materially to the resources of the country for bread; and if, as is asserted, it cannot be manufactured into the finest kinds of flour, it is excellent and palatable in every form of household flour or bread, and will of course enable the farmer to throw greater quantities of winter wheat into the market.

Scab in Sheep.

Mr. Tucker—This being the proper time to give the information, I send you an account of the manner in which I treat sheep affected with the scab. I recommend that sheep be put in a newly burned fallow as soon as possible after shearing. People are careful to avoid the blacking of sheep, but I think it a sure remedy for the scab, and also for the foot rot. Let them have access to a piece of burnt ground as fresh as possible. Leave down the fences from the pasture, and they will invariably go a mile to get to it for their lodging. Like patent medicines it cures all diseases. It is an almost certain remedy for the fly that produces the worm in the head. If sheep can have access to a piece of burnt ground, they are sure to make it their resting place day and night. It promotes the health of sheep and does no damage to the wool. Until late in the fall, I generally keep from seven to ten hundred sheep, and have tried the above experiment, and of late years let my sheep have access to fresh burnt ground, and they are remarkably healthy.

John Spicer.

East Barrington, Yates Co., March 10, 1838.

Wool over the Eyes.

Mr. Tucker—Since I have commenced giving an account of my experience and observations relative to wool-growing, I thought it might be well to mention one other obstruction that impedes the comfort and takes the lives of sheep. Although I see there are many close observers that write for the Farmer, they as yet have neglected to urge the necessity of examining the eyes of sheep. I have frequently discovered sheep with their eyes shut, or mostly so. On examination, I find the hair that grows about the eyes to be turned into the eye. Lambs in the winter before they are a year old, are the most troubled; those that have the most wool about the head are the most liable. I have yearly to shear the faces of fifty to seventy, that get into that situation, and open their eyes and cut out the hair. Some sheep become perfectly blind, dwindle and fail. There are many instances among old sheep of high blood. It requires the greatest care to open the eye, and with a sharp shears cut the hair close. This is not only the case with my sheep, but I have frequently passed the flocks of others that were tormented in the same way.

John Spicer.

East Barrington, Yates Co., March 10, 1838.

DURHAM CATTLE.

It is a matter of surprise even to some of our agricultural friends, how this improved breed of cattle can be worth the high prices they are bringing throughout our country.

There are many reasons for this. First, they grow larger than our common cattle. Secondly, their flesh grows more abundantly in those parts where it is considered most superior. Thirdly, they fatten more easily than ordinary kinds. Fourthly, cows of this blood give more milk, and some think of a better quality. Fifthly, this stock arrives at maturity much earlier than the common cattle of our country.

It has been often remarked that if all the grain and hay an ox or cow of the common breeds eat, before they arrive at maturity, were weighed and measured, and sold, that it would amount to more than the animal would sell for,to say nothing about the time spent in feeding or the amount of pasturage. We have no doubt that the way cattle have been managed, generally, in this state, this remark would hold good. This, then, renders it important, that every effort should be made by our stock raisers, to economize by the preparation of food, especially in this country, where such beautiful crops of roots may be produced, and where so much, that may with a little attention and preparation be converted into fodder, is suffered to stand in our fields and go to waste. But more especially would it be to their advantage, as soon as possible to get into a breed of cattle that will come to maturity *earlier* than those that they now have.

On this account, perhaps, arises the profit from the Durham cattle, more than from any other cause. They are said to come to maturity from two to three years earlier than our scrub cattle. This, we have no doubt is the fact, when they are well attended to, and the common breed receive only *ordinary* attention. But there is no doubt, with the *same care*, the expense of feeding one or two winters may be saved by our farmers, if they will procure the Durham cattle, which together with the profits arising from the other superior qualities they possess, will make the stock raising business in this state, so peculiarly adapted to that branch of husbandry, a most lucrative business.—*Indiana Farmer.*

Horticultural Report.

At the late meeting of the New-York State Agriculture Society, Mr. A. Walsh, of Rensselaer, from the committee to report on the subject of horticulture, and the household arts, presented the following report, which was read and adopted:

The committee appointed to "inquire into the necessity and importance of an increased attention to Horticulture and the Household Arts, as intimately connected with the improvement of Agriculture," beg leave to report—

That on investigating the subject in pursuance of the duty assigned them, they have become deeply impressed with a sense of its importance; and they regret that the necessary degree of brevity will only permit them to touch the mere outlines of some of the most prominent arguments which present themselves in its favor.

By the term horticulture, they understand that portion of agriculture which embraces the labors of the garden —the cultivation of vegetables, fruits, &c.

It is strange, as well as lamentable, that though this appears especially designed, by the Creator, as the first and most important employment of man, yet while every useful art is improving and perfecting by the light of science, this most valuable art should be left to groupe in darkness—its value remaining unknown and unappreciated. All, therefore, that your committee can do is, to endeavor to awaken the public mind from the apathy under which it sleeps on the subject; to remove the strange prejudice which exists against it; and to open a way for the reception of those spontaneous rays of light which present themselves from luminous sources.

And here, at the outset, your committee feel under peculiar embarrassments; for what arguments can be offered, to awaken to understanding the mind of him who can discover no profit, or receive no pleasure, from a well cultivated garden.

It is in vain that Infinite Wisdom has exerted its utmost skill in forming, perfuming and painting flowers to decorate his path, and sweeten the toils of life, if the same power has denied him a mind susceptable of the enjoyment. The depravity of public taste, with the respect to gardening, has given currency to a common saying, that "good farmers seldom have good gardens," but never was a sentence more in opposition to the truth. It is so completely so, that if we look on even a remote corner of a farm, and see it well fenced and cultivated, we may almost rest assured that on visiting the dwelling of its owner, we shall find a neat, tasteful and well stocked farm garden. Indeed, so intimately connected are the moral and social virtues, with a taste for admiring and improving the beauties of nature, that we can rarely find one without the other. There is, perhaps, no other earthly subject so well calculated to awaken and expand every faculty of the mind, and fill the soul with pleasing admiration, as a garden of culinary plants, fruits and flowers, where art and science have done their duty in assisting nature.

Horticulture, both as an art and as a science, has undergone great improvements, in several countries in Europe; and it must be painfully mortifying to an American of patriotic feelings, who is acquainted with the subject, to see respectable foreigners, in passing through our country, notice the almost total neglect of this beautifying, and moralizing branch of social economy.

The mode in which agriculture, if it can be so called, has hitherto been conducted, had its origin, no doubt, in the circumstance of the early settlers of our country. Those pioneers were not in situations to indulge refined taste; being only enabled by their utmost exertions to procure what would barely sustain life; and pecuniary necessity, compelled them to cultivate such simple articles as they could dispose of, in mass, for immediate relief, and the state of society afforded no market for fruits or garden vegetables. This state of things established a distaste for any thing to gratify the eye or the palate, beyond bare necessity; and this distaste has continued with little improvement to the present time.

But a few, among those engaged in agriculture, have discovered that, by rational improvements in the system, not only the same ground, with the same labor, might be made to double, and even quadruple its former productions; but that horticulture, tastefully and judiciously managed, is calculated to improve the mind, to excite and expand the intellectual faculties; and especially to increase wealth, at least as much as any other branch of agriculture.

The ancient prejudices against horticulture, are now beginning to be overcome, by the convincing evidence of successful results, and some of the more industrious and thinking farmers begin to see that a well selected assortment of choice fruit yields a greater profit, than perhaps any other crop from the same ground; that the choice new garden vegetables cost no more in cultivation than the most coarse and common, while they add comfort and healthy variety to the table,and lessen the heavier expense of animal food. They begin, in a few instances, to find that the value of a farm depends not so much upon the number of acres as upon its judicious mode of culture, and its productiveness. They see that a handsome and convenient, but not a large and extravagant dwelling, surrounded by fruit and ornamental trees, but more particularly a well stocked farm house garden, not only increase their comforts and respectability, and even their wealth while in possession, but if they wish to sell, attracts the notice of purchasers and enhances the price.

Our forests abound with maple, elm, ash, and other elegantly formed ornamental shade trees, which we would recommend our agriculturists to plant along the road side, bordering their homesteads. They will thrive in almost any situation, and add beauty and value to their possessions and improve the general aspect of the country. "We never pass a tree which has been planted and nurtured by man, but we feel gratitude and respect towards the hand that done it." The cultivation of the Mulberry and the growth of timber, particularly live oak, locust and cedar, deserve the highest consideration; such trees beding required, and commanding a high price for ship building, and in our growing manufactories.

In short, from the palace to the humblest cottage the business of horticulture, when carried to the perfection of which it is susceptible, appears to your committee, to be calculated, above all other branches of industry, to improve the mind and manners; to increase and multiply the comforts, and promote the wealth and respectability of the community.

We would therefore recommend to all, to use all justifiable exertions to excite a more general taste for horticulture, and to promote a more thorough and generally diffused knowledge of its principles and practice.–To this end, we would recommend, that those who have any knowledge of the subject would communicate it to those who have none, and that more general attention should be paid to the various periodicals which are published and publishing on horticulture, and subjects connected with it—and they would also suggest, that should the honorable legislature think proper to lend their aid to the subject, as they have done in some of the other states, much might be effected by their employing and paying some suitable person to write or compile a text book, as a manual for the use of farmers and mechanics, on horticulture and the household arts, and particularly on the subject of the growing of silk.

With respect to the "necessity and importance of the household arts," your committee are fully convinced, that, in the thriftiness, and good regulations and consequent happiness of society, as much depends on good housewifery as on good husbandry. It is a common saying, that "the man who would thrive must ask his wife." These arts are not only more numerous and complicate, but susceptible of even greater improvements both from the aid of science and the dictates of common sense, than

those which belong to the outdoor economy; and they principally belong to the female department. The culinary arts alone embrace a more extensive and complicated system of knowledge than probably appertains to any one trade in the compass of the mechanic arts. On that system depends, not only our comfort and satisfaction in eating and drinking, and our health in the choice and preparation of food, but our prosperity in the economy of its management. The important business of the dairy depends almost entirely upon the skill of the housewife. But a few years ago they were the sole manufacturers of most of our clothing, and still a portion of it depends for its formation on their ingenuity and industry; even in the cottages of the poor, we may often admire the talents of the industrious housewife where

"The mither, wi' her needle an' her shears,
Gars ould claes look amaist as weel's the new."

But these important domestic arts, on which our comforts and prosperity so much depends, are too much neglected and despised. It is the duty, and ought to be the pride of every mother in America, to teach her daughters, first the most substantial and all important arts of good housewifery; and next to call forth and excite to action all their surplus ingenuity, diverting it into such channels as will elevate our national character, and by lessening dependence on foreign nations, promote the independence of our own.

It is natural, and perhaps proper, for females to delight in finery; and to this end, nature has invested them with sprightly intellects to invent, and delicate fingers to construct it. But instead of availing themselves of these precious gifts of nature, our females generally appear to have almost wholly lost sight of, or never to have possessed a spark of that national pride which would prompt them to turn those talents to their own advantage. It would be deemed an insult to say that they have not as much inventive talent and refined taste as the females of France, and yet they appear to have cultivated a spirit of emulation to outdo each other in servile dependance on French fashions and French finery; (which fashions and finery do not arrive here, until cast off in France, so that the summer dresses of that country becomc the unsuitable winter dresses of this* until by extravagant importations of those articles, added to the immense amount paid for silk beyond our means, we have continued to plunge our country into a state of pecuniary distress, from which it will not soon be extricated. How much more independence should we display if our females would employ their leisure hours, and exert their ingenuity, in constructing ornamental dresses suited to our climate, according with their own refined taste, and let the French follow their own fashions, or servilely copy ours if they please.

Those of our young females who are destined to receive what is considered a polite education, are by the present national public taste, studiously kept ignorant of any thing which can contribute in the slightest degree to the future benefit of their families or themselves. Thus, in most of the more opulent families of the community, those important arts on which domestic comforts so greatly depend are left to the sole possession and management of domestics.

It is, therefore, of the highest importance, that females who are coming on the stage of action, should receive such education as should fit them in a greater degree for the important stations they are destined to fill. Without rejecting what are justly considered polite accomplishments, every female who is to become the head of a family, ought to have a thorough theoretic and practical knowledge of all the arts which appertain to cookery and systematic household arrangement. This knowledge would be greatly enhanced by an acquaintauce with some of the natural sciences, particularly chemistry. Indeed, so important is a smattering of that branch of science, in every part of household economy, especially in the management of a dairy, that no female ought to be considered well educated without it.

But there is one branch of the household arts which your committee would strongly recommend.

By the aid of labor saving inventions, females are relieved from a great and tedious part of their former labors, and they have consequently now a considerable portion of leisure.

There are many little household arts, by which they could manufacture little articles, which would command fair prices in market.

Many of these arts have been introduced by necessity in other countries; and a little attention to the subject would render them sources of profit here.

There is one which we would earnestly recommend, as paramount to, and propably surperceding the necessity of any other. This is the growing and reeling of silk. This is, perhaps, as pleasing an employment as the human faculties can be engaged in. It is inseparably connected with a branch of horticulture, and will need some male assistance in cultivating the Mulberry trees, and erecting necessary fixtures. But the growing the silk is the appropriate work of women and children. It is periodical, leaving long intervals of rest; and the reeling is a light,easy and social employment, peculiarly calculated for delicate female fingers.

The profits arising from this business will be equal, if not superior, to those of any other branch connected with agriculture; and it will need no other time devoted to it in the female department than is now devoted to leisure. It is now the heaviest item of our importations, and will find a sure market among ourselves, or will command a high price in return for its exportation.

Your committee, therefore, would most fervently urge that a proper attention to horticulture, effecting by art and science all the improvements of which it is susceptible, and similar attention to the household arts, as of the highest national importance, particularly the growing of silk, affording the surest guarantee to the independence and prosperity of our union.

Your committee would also strongly urge the importance of County Fairs, as one of the most efficient means of improving both agriculture and horticulture, and the household arts, by awakening ambition and exciting a spirit of emulation in both sexes. These Fairs would, as they have already done in many places, call forth new displays of ingenity—choice products of the farm and of the garden, in needle work and miscellaneous subjects; and we think the legislature would do much to exalt the national character by appropriating a small fund to each county, that may have its rural society for the support of such Fairs.

All of which is respectfully submitted.

ALEXANDER WALSH, *Chairman.*

*In glancing at this part of the report in search of facts in corroboration of the statement; and the first thought brought to our mind's eye the subject of ladies hats or of bonnets, during the summer past. In April, about the time of the arrival of the French winter fashions, the most conspicuous object in every female promenade was large rugged bonnets of lapped Leghorn or straw, calculated to protect the head from a bitter snow storm—and when, with the chilling winds of Autumn, the fall importations brought us from that world of fashion, what had appropriately graced the French ladies' heads through the heat of summer, every American lady's head is strained to the highest pitch of erection to display as the newest fashion, *a bonnet of the thinest silk with two or three damask roses* striving to protrude from under it, as if to say, that female charms can cause roses to bloom in spite of the blasts of winter.

Superior Garden & Agricultural Seeds.

THE subscriber has now on hand a full supply of Garden and Field Seeds, growth of 1837, among which are the finest Cabbages, Cauliflowers, Broccoli, Radishes, Peas, &c. that are cultivated in England, France, and Holland, together with every sort that can be raised to advantage in our own country, and which are grown expressly for my use from stock furnished and raised by the most experienced gardeners in this country; in short, every article emanating from my store, warranted genuine and fresh.

Also, Skinless Oats, Potatoe Oats, 44 lb. weight to the bushel, Perennial Rye Grass, White Clover, Lucerne or French Clover, Orchard Grass, Herd's Grass, White Mulberry, and Yellow Locust Seeds, Spring Tares or Vetches, genuine Mangel Wurtzel, and Ruta Baga and Field Turnep Seeds, also Italian Spring Wheat, well worth the attention of Farmers.

Wholesale Dealers supplied on accommodating terms. Price lists, by the pound and bushel, furnished on application, as also catalogues of my whole collection, gratis.

Flower Roots, Bulb Glasses, Green-house Plants, the best Books on Gardening, &c. at various prices, Birdseed of every sort, Pearl Barley, Oatmeal, Embdon Grots for Gruel, Split Peas, White and Brown Mustard Seed, Garden Flower Pots and Garden Tools, Russian Bass Mats.

The Flower Seed department embraces the choicest variety to be found in this country, in which are included choice double Dahlia Seed, Carnation and choice Pinks, German and China Asters, splendid Double Balsoms, with an addition of several new varieties, accompanied with a printed direction for culture and management.

Orders will be punctually attended to and carefully packed and forwarded as directed, but as the collection of distant debts are often troublesome, and sometimes impracticable, it is desired that satisfactory reference be made to persons in Albany, when the order is not accompanied with the money.

☞ Also, SEED CORN.—The subscriber has a quantity of the celebrated 12 rowed Dutton Corn; the advantages of raising this corn are its prolific qualities.

W. THORBURN, Seedsman,
Sign of the Plough, 317 N. Market st. opposite Post Office.
Albany March 17. 1838. mar24

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county, state of New York, a large quantity of Fruit Trees, grafted and innoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms. SAMUEL MOULSON.

apr 15-tf

N. B. CASH will be paid for a few thousand two years old APPLE TREES.

THE HIGH-BRED TROTTING HORSE

BELLPORT!

BELLPORT will stand the present season, commencing 1st of May and ending 1st of August, at Clarence Hollow and Batavia. Terms, $15 to insure, payable 1st of January next.

DESCRIPTION.

Bellport was foaled at Long Island, June, 1831, will consequently be seven years old the coming summer, is of a beautiful bright blood bay, with a small star in the forehead, one white foot, and black legs, mane and tail—is within a fraction of sixteen and a half hands high, (65 1-2 inches,) of proportionate girth and length, a well set head, elegant arched neck, full powerful chest, of beautiful smooth symetry of limbs, and yet of great bone and muscle, weighing twelve hundred and forty-seven pounds.

OF HIS PEDIGREE.

It need only be said, that he was got by the Imported Horse Bellfounder, out of Lady Alport, he by the celebrated trotter Old Bellfounder, dam Velocity, by Haphazard, by Sir Peter, out of Miss Henry, by the famous Eclipse, and thus up to the Darley Arabian, the great progenitor of England's stoutest and most beautiful racing stcok. Lady Alport was got by Membrina, he by Imported Messenger, dam by Tippoo Saib, &c. &c. For further particulars of which horses see Stud Book.

It will be seen by the above, that Bellport unites the *best* of England's *racing and trotting blood.* Bellfounder at five years old trotted 2 miles in less than 6 minutes, and the following year was matched for 200 guineas to trot 9 miles within 30 minutes, which he won easily. His owner shortly after challenged to perform with him 17 1-2 miles within one hour, which was not accepted. Velocity trotted on the Norwich road in 1806, sixteen miles in one hour; in 1808, trotted twenty eight miles in one hour forty-seven seconds, and has done many other great performances against time. With the exception of Flying Childers, from the same progenitor, Eclipse was undoubtedly the fastest horse ever known. Having *distanced* all competitors, he at last walked over the Newmarket course for the King's plate, and finding nothing hardy enough thereafter to match him, was never again started. Haphazard, Sir Peter, Membrina, Tippoo Saib and Messenger, were among the best horses of their day, and as good stock as England ever produced.

Bellport was bred by T. T. Kissam, Esq. of New-York, and was selected after much care and attention to the subject, for his uniting good blood and limbs to fine action and great substance, qualities so rarely found in the light race horse of the present day. He has stood two seasons in this vicinity, his stock shows fine size and form, and will undoubtedly prove very superior, either for the saddle or harness, and particularly adapted for the heavy roads of Western New-York. His spirited breeder in a letter accompanying him out here, thus speaks of the blood:—"Bellport is from a stock held in high estimation, both in England and in this country. There are several horses here sired by Bellfounder that can trot a mile within 2 minutes and 45 seconds, and could not be bought for $500; one of them could not be had for $1500; it is supposed that he can trot a mile in 2 minutes 35 seconds. This young horse I have never had trained, nor even much practiced; he has a very fine step, and I have not a doubt but he will be able to trot a mile within 3 minutes."

The Farmer will therefore see, that he may reasonably calculate on the best of stock from this source, and it is a matter of no trifling importance to him, whether he shall turn off a colt at from $200 to $500, that has cost no more to be raised than one that will hardly bring from $50 to $80.

—

Bellfounder is a full brother to Bellport, one year older, marked as above, his color simply a shade or two darker, and is half a hand less in height. He is a horse of admirable finish, and with a partial trial under the saddle the year he was 5 years old, easily trotted over the Harlem Course (a few feet short of a mile) in 2 minutes 45 seconds, and it is the opinion of his trainer, that notwithstanding the difficulty of curbing so high spirited a horse to a trot, that upon a second and more thorough trial, he could be given as fast a foot as ever graced the trotting course of America. He will probably stand the ensuing season on the Niagara River road, two miles below Black Rock.

Either of the above horses will be sold, or exchanged for other stock at a fair price, or hired to a responsible person for any part of the country.

For further particulars refer to L. F. ALLEN or A. B. ALLEN, of Buffalo. HENRY GORDON.

March 10, 1838.

Spring Wheat.

JUST received at the Rochester Seed Store, a further supply of genuine *Italian* and *Bald Siberian* Spring Wheat, both of which are highly recommended and of superior quality. REYNOLDS & BATEHAM.

Feb. 17, 1838.

Seeds for 1838.

JUST arrived at the Rochester Seed Store, a large importation of English Field and Garden Seeds, of the growth of 1837; shipped from London this fall expressly to our order, and comprising a full assortment of the choicest kinds, such as

Cabbage,	Ruta Baga,	Rye Grass,
Cauliflower,	Mangel Wurtzel,	White Dutch
Brocoli,	Sugar Beet,	Clover,
Radish,	Lucern,	&c., &c.
Turnep,	Trefoil,	

These Seeds are from one of the best establishments in Europe, and the perfect satisfaction which they have hitherto given, is sufficient guarantee of their character.

Dealers and others supplied at wholesale on very favorable terms. nov18tf REYNOLDS & BATEHAM.